AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (original) A method for classifying a patient having diffuse large B-cell lymphoma (DLBCL), the method comprising measuring expression of a plurality of genes, in a tumor sample from the patient and correlating normalized tumor expression values to normalized reference expression values obtained for the plurality of genes from DLBCL patients stratified in said classification groups.

2. (original) The method of claim 1, wherein the method predicts patient survival, wherein the plurality of genes comprises a plurality of genes predictive of survival and wherein classification groups comprise groups of known overall survival.

3. (original) The method of claim 2, wherein overall survival comprises overall survival after anthracycline-based chemotherapy.

4. (original) The method of claim 1, wherein measuring expression comprises performing real time RT-PCR on the tumor sample from the patient.

5. (original) The method of claim 1, wherein normalized tumor expression values and normalized reference expression values comprise ratios of expression values to expression values of a housekeeping gene.

6. (original) The method of claim 5, wherein the housekeeping gene is *PGK1* or *GAPDH*.

7. (original) The method of claim 6, wherein the housekeeping gene is *PGK*1.

8. (original) The method of claim 1, wherein the normalized tumor expression values and normalized reference expression values comprise ratios of expression values in DLBCL cells to expression values in a reference cell line.

9. (original) The method of claim 8, wherein the reference cell line is a Raji cell line.

10. (original) The method of claim 1, wherein expression values from DLBCL patients have been stratified based upon expression values for the plurality of genes by performing univariate Cox proportional hazards analysis with the classification as dependent variable.

11. (original) The method of claim 2, wherein expression values from DLBCL patients have been stratified base upon expression values for the plurality of genes by performing univariate Cox proportional hazards analysis with overall survival as dependent variable.

12. (original) The method of claim 2, wherein correlating comprises determining whether the expression of said plurality of genes is similar to normalized reference expression values obtained from DLBCL patients having low, medium or high overall survival after anthracycline-based chemotherapy.

13. (original) The method of claim 12, wherein determining further comprises determining whether the patient has a low, medium or high International Prognostic Index score.

14. (original) The method of claim 2, wherein the plurality of genes predictive of overall survival in patients having DLBCL comprises at least two genes selected from the group consisting of LMO2, BCL6, FN1, CCND2, SCYA3 and BCL2.

15. (original) The method of claim 14, wherein one of the at least two genes is BCL6.

16. (original) The method of claim 2, wherein the plurality of genes predictive of overall survival in patients having DLBCL comprises *LMO2, BCL-6, FN1, CCND2, SCYA3* and *BCL-2*.

17. (original) The method of claim 2, wherein the plurality of genes predictive of overall survival in patients having DLBCL consists of *LMO2, BCL-6, FN1, CCND2, SCYA3* and *BCL-2*.

18.   (original) The method of claim 17, wherein determining is based upon weighed predictor Z in formula:

Z = (A x LMO2) + (B x BCL6) + (C x FN1) + (D x CCND2) + (E x SCYA3) + (F x BCL2)

wherein A is about - 0.03, B is about -0.2, C is about -0.2, D is about 0.03, E is about 0.2 and F is about 0.6 and wherein LMO2, BCL6, FN1, CCND2, SCYA3 and BCL2 are log base 2 of normalized expression values for genes *LMO2*, *BCL-6*, *FN1*, *CCND2*, *SCYA3* and *BCL-2*., respectively.

19.   (original) The method of claim 18 wherein A is about - 0.0273, B is about - 0.2103, C is about -0.1878, D is about 0.0346, E is about 0.1888 and F is about 0.5527.

20.   (original) The method of claim 18, wherein a Z value of less than about - 0.06 indicates high probability of survival, a Z value of from about -0.06 to about 0.09 indicates medium probability of survival and a Z value of greater than about 0.09 indicates low probability of survival.

21.   (original) The method of claim 20, wherein a Z value of less than about - 0.063 indicates high probability of survival, a Z value of from about -0.063 to about 0.093 indicates medium probability of survival and a Z value of greater than about 0.093 indicates low probability of survival.

22. (original) A method for obtaining a formula for characterizing patients having a disease, the method comprising correlating normalized expression values of a plurality of genes in tumor samples obtained from patients having the disease to at least one known classification characteristic of the disease.

23. (original) The method of claim 22, wherein the disease is DLBCL.

24. (original) The method of claim 23, wherein the formula predicts probability of patient survival.

25. (original) The method of claim 24, wherein the at least one known classification characteristic of the disease is overall survival.

26. (original) The method of claim 25, wherein overall survival comprises overall survival after anthracycline-based chemotherapy.

27. (original) The method of claim 22, wherein correlating comprises performing univariate Cox proportional hazards analysis with the classification as the dependent variable.

28. (original) The method of claim 27, wherein correlating comprises performing univariate Cox proportional hazards analysis with overall survival as the dependent variable.

29.   (original)   The method of claim 22, wherein measuring expression comprises performing real time RT-PCR on the tumor samples from the patients.

30.   (original)   The method of claim 22, wherein the patients having the disease are characterized by measuring gene expression values in a tumor sample from each of the patients.

31.   (original)   The method of claim 30, wherein expression values comprise normalized expression values.

32.   (original)   The method of claim 22, wherein normalized expression values comprise ratios of expression to expression values of a housekeeping gene.

33.   (original)   The method of claim 32, wherein the housekeeping gene is *PGK1* or *GAPDH*.

34.   (original)   The method of claim 33, wherein the housekeeping gene is *PGK1*.

35.   (original)   The method of claim 1, wherein normalized expression values comprise ratios of expression values of the plurality of genes in DLBCL cells and expression values in a reference cell line.

36. (original) The method of claim 35, wherein the reference cell line is a Raji cell line.

37. (original) The method of claim 26, wherein the classification characteristic for DLBCL comprises low, medium and high probability of overall survival after anthracycline-based chemotherapy.

38. (original) The method of claim 37, wherein the classification characteristic further comprises determining whether the patient has a low, medium or high International Prognostic Index score.

39. (original) The method of claim 24 wherein the formula comprises weighted prediction formula:

$Z = (K1 \times G1) + \ldots + (Kn \times Gn)$ wherein G represents log base 2 of normalized expression value for gene G, K represents a weighted constant, and n is at least 2.

40. (original) A kit comprising assays for measuring expression of a plurality of genes in a tumor sample from a patient having DLBCL, wherein normalized expression of the plurality of genes in tumor samples from DLBCL patients stratifies the patients into classification groups.

41. (original)   The kit of claim 40, wherein the plurality of genes classify DLBCL patients in groups predictive of probability of survival.

42. (original)   The kit of claim 41 wherein survival comprises survival after anthracycline-based chemotherapy.

43. (original)   The kit of claim 40, wherein the assays are real-time RT-PCR assays.

44. (original)   The kit of claim 40, which further comprises an assay for measuring expression of a housekeeping gene in a tumor sample, wherein normalized expression values comprise ratios of gene expression values to expression values of the housekeeping gene.

45. (currently amended)   The ~~method~~ kit of claim 44, wherein the housekeeping gene is *PGK1* or *GAPDH*.

46. (currently amended)   The ~~method~~ kit of claim 45, wherein the housekeeping gene is *PGK1*.

47. (original)   The kit of claim 41 wherein the survival probability groups comprise groups of low, medium or high overall survival after anthracycline-based chemotherapy.

48.   (original) The kit of claim 46, wherein the survival probability groups further comprises groups of low, medium or high International Prognostic Index score.

49.   (original) The kit of claim 40, wherein the plurality of genes comprise at least two genes selected from the group consisting of *LMO2, BCL-6, FN1, CCND2, SCYA3* and *BCL-2*.

50.   (original) The kit of claim 49, wherein one of the at least two genes is *BCL-6*.

51.   (original) The kit of claim 41, wherein the plurality of genes comprise *LMO2, BCL-6, FN1, CCND2, SCYA3* and *BCL-2*.

52.   (original) The kit of claim 51, wherein the plurality of genes consists of *LMO2, BCL-6, FN1, CCND2, SCYA3* and *BCL-2*.

53.   (original) The kit of claim 52, wherein survival probability is based upon weighed predictor Z in formula:

$$Z = (A \times LMO2) + (B \times BCL6) + (C \times FN1) + (D \times CCND2) + (E \times SCYA3) + (F \times BCL2)$$

wherein A is about - 0.03, B is about -0.2, C is about -0.2, D is about 0.03, E is about 0.2 and F is about 0.6 and wherein LMO2, BCL6, FN1, CCND2, SCYA3 and

BCL2 are log base 2 of normalized expression values for genes *LMO2, BCL-6, FN1, CCND2, SCYA3* and *BCL-2*, respectively.

54. (original) The kit of claim 52 wherein A is about - 0.0273, B is about - 0.2103, C is about -0.1878, D is about 0.0346, E is about 0.1888 and F is about 0.5527.

55. (original) The kit of claim 53, wherein a Z value of less than about -0.06 indicates high probability of survival, a Z value of from about -0.06 to about 0.09 indicates medium probability of survival and a Z value of greater than about 0.09 indicates low probability of survival.

56. (original) The kit of claim 55, wherein a Z value of less than about -0.063 indicates high probability of survival, a Z value of from about -0.063 to about 0.093 indicates medium probability of survival and a Z value of greater than about 0.093 indicates low probability of survival.

57. (original) A method for predicting survival in a patient having DLBCL, the method comprising measuring in a sample containing tumor cells from the patient, expression of three or more genes selected from the group consisting of *LMO2, BCL-6, FN1, CCND2, SCYA3* and *BCL-2.*; and determining whether normalized expression of the three or more genes indicates increased or decreased probability of survival.

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58. (original)   The method of claim 57, wherein determining comprises determining whether normalized expression of the three or more genes matches expression criteria indicative of increased probability of survival, compared to expression in reference cells, said expression criteria being selected from the group consisting of increased expression of *LMO2*, increased expression of *BCL-6*, increased expression of *FN1*, decreased expression of *CCND2*, decreased expression of *SCYA3* and decreased expression of *BCL-2*.

59. (original)   The method of claim 58, wherein the reference cells are Raji cells.

60. (original)   The method of claim 58, wherein normalized expression comprises ratio of expression of a gene to expression of a housekeeping gene.

61. (original)   The method of claim 60, wherein the housekeeping gene is *PGK1* or *GAPDH*.

62. (original)   The method of claim 61, wherein the housekeeping gene is *PGK1*.

63. (original)   The method of claim 57, wherein the three or more genes comprise *BCL-6*.

64. (original) The method of claim 57, wherein determining comprises determining whether normalized expression matches expression criteria indicative of increased probability of survival, referenced to expression in reference cells, said expression criteria selected from the group consisting of increased expression of *LMO2*, increased expression of *BCL-6*, increased expression of *FN1*, decreased expression of *CCND2*, decreased expression of *SCYA3* and decreased expression of *BCL-2*.

65. (original) The method of claim 64, wherein the reference cells are Raji cells.

66. (original) The method of claim 64, wherein normalized expression comprises ratio of expression of a gene to expression of a housekeeping gene.

67. (original) The method of claim 66, wherein the housekeeping gene is *PGK1* or *GAPDH*.

68. (original) The method of claim 67, wherein the housekeeping gene is *PGK1*.

69. (original) The method of claim 64, wherein determining comprises determining whether normalized expression matches expression criteria indicative of increased probability of survival, referenced to expression in reference cells, said expression criteria consisting of increased expression of *LMO2*, increased expression of

BCL-6, increased expression of *FN1*, decreased expression of *CCND2*, decreased expression of *SCYA3* and decreased expression of *BCL-2*.

70.   (original)   The method of claim 69, wherein the non-cancerous cells are Raji cells.

71.   (original)   The method of claim 69, wherein normalized expression comprises ratio of expression of a gene to expression of a housekeeping gene.

72.   (original)   The method of claim 71, wherein the housekeeping gene is *PGK1* or *GAPDH*.

73.   (original)   The method of claim 72, wherein the housekeeping gene is *PGK1*.

74.   (currently amended)   The method of claim 73, wherein the expression criteria are measured by a cDNA, microarray test, [[or]] a cRNA microarray test, a tissue microarray test or a ~~real-time RT~~-PCR on the tumor sample from the patient.

75.   (original)   The method of claim 57, wherein determining probability of survival comprises determining whether the patient has a low, medium or high probability of survival after anthracycline-based chemotherapy.

76.   (original) The method of claim 75, wherein determining further comprises determining whether the patient has a low, medium or high International Prognostic Index score.